

CLAIMS:

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1. A device for evacuating waste product through an orifice in a mammalian body, the device including a chamber having an inlet and an outlet, the inlet being able to be brought into abutment with the body about the orifice and the outlet being connectable to a suction means, the device further including an irrigating means for introducing an irrigating fluid into the orifice, the irrigating means having a free end that is movable relative to the chamber between at least a first position outside the orifice and a second position at least partially within the orifice.
- 10 2. A device for evacuating waste product through an orifice in a mammalian body, the device including a chamber having an inlet and an outlet, the inlet being able to be brought into abutment with the body about the orifice and the outlet being connectable to a suction means, and an orifice engaging means that is insertable within the bodily orifice and substantially seals said bodily orifice when the inlet of the chamber is in abutment with the body.
- 15 3. The device of claim 1 or claim 2 wherein the inlet of the chamber seals with the body about the orifice.
- 20 4. The device of any one of the preceding claims wherein the inlet is formed from a resiliently flexible material.
5. The device of any one of the preceding claims wherein the inlet is substantially circular.
- 25 6. The device of any one of the preceding claims wherein the inlet includes a bellow means that allows the inlet to deform on abutment with the body.
7. The device of claim 6 wherein the bellow means is formed from a silicone material.
- 30 8. The device of any one of the preceding claims wherein the inlet is located at a first end of the chamber and the outlet of the chamber is located at a second end of the chamber distal the first end.
9. The device of claim 8 wherein the outlet comprises an opening in the second end of the chamber.

10. The device of claim 9 wherein the opening is surrounded by a spout extending outwardly from the second end and having a central bore in fluid communication with the opening.

11. The device of claim 10 wherein the spout has an outer wall that tapers in diameter away from the second end and is detachably attachable to a pipe or tube that extends to or passes through a suction means.

12. The device of any one of claims 8 to 11 wherein the second end of the chamber is formed integrally with the chamber.

13. The device of any one of claims 8 to 11 wherein the second end of the chamber is formed separately from and subsequently mounted to the chamber.

14. The device of claim 13 wherein the second end of the chamber has a skirt portion having a screw thread adapted to engage with a complementary screw thread on the chamber.

15. The device of claim 14 wherein an O-ring is located adjacent the screw thread between the skirt portion and the chamber to prevent waste product escaping from the chamber between the skirt portion and the wall of the chamber.

16. The device of any one of the preceding claims wherein the chamber has a further orifice formed therein to allow pressure equalisation between the interior and exterior of the chamber.

17. The device of claim 16 wherein the further orifice is formed in a wall of the chamber and wherein the further orifice has an open-ended tube connected thereto.

18. The device of claim 16 or claim 17 wherein the further orifice is adapted to be sealable by a finger of the user.

19. The device of claim 16 or claim 17 wherein the further orifice is sealed by a pressure release valve or electronically actuated valve and wherein further, the valve vents the chamber should the pressure level within the chamber fall below a pre-set limit.

20. The device of claim 8 wherein the diameter of the chamber decreases from the first end to the second end.

21. The device of claim 20 wherein the chamber decreases in diameter relatively rapidly adjacent its first end and then decreases in diameter relatively slowly distal the first end.

22. The device of claim 20 wherein the diameter decreases relatively 5 rapidly adjacent the first end and then remains at a constant diameter distal the first end.

23. The device of any one of claims 20 to 22 wherein the chamber is substantially frusto-conical along at least a portion of its length.

24. The device of any one of the preceding claims wherein the chamber 10 includes at least one lug adapted to be connected to a belt, strap or other like means of holding the chamber to the body of the user.

25. The device of claim 24 wherein the chamber has two oppositely disposed lugs at or adjacent its first end to which the respective ends of a belt are attached.

15 ^{Sub}_{B1} 26. The device of claim 1 wherein the irrigating means comprises a catheter having at least one lumen in fluid communication with an orifice for the passage of an irrigation fluid and a free end for insertion into the bodily orifice of a user.

27. The device of claim 26 wherein the catheter extends through an 20 opening in the outlet of the chamber, and further, wherein the catheter is movable relative to the outlet while also retaining a substantial seal with the opening in the outlet.

28. The device of claim 27 wherein an O-ring or grommet extends around the catheter to maintain a seal between the catheter and the outlet.

29. The device of claim 26 wherein the catheter extends through a wall of 25 the chamber.

30. The device of claim 29 wherein an O-ring or grommet extends around the catheter to maintain a seal between the catheter and the wall of the chamber.

31. The device of any one of claims 26 to 30 wherein the catheter is 30 resiliently flexible along at least a portion of its length.

32. The device of claim 31 wherein a portion of the catheter adjacent its free end is more rigid than the remainder of the catheter.

33. The device of claim 31 wherein a portion of the catheter adjacent its free end is less rigid than the remainder of the catheter.

34. The device of any one of claims 26 to 33 wherein the orifice of the lumen of the catheter is located adjacent the free end of the catheter.

35. The device of any one of claims 26 to 33 wherein the orifice of the lumen of the catheter is in a sidewall of the catheter.

36. The device of claim 26 wherein the catheter has two or more orifices adjacent its free end.

37. The device of claim 26 wherein the catheter further includes an orifice engaging member that is engagable with the wall of the orifice in the mammalian body when the catheter is in the second position relative to the chamber.

38. The device of claim 37 wherein the orifice engaging member is an expandable member positioned adjacent the free end of the catheter, the orifice engaging member being able to be expanded when the catheter is in the second position within the bodily orifice.

39. The device of claim 38 wherein the expandable member comprises a balloon member that is inflatable by passing a fluid through the catheter to expand the balloon member.

40. The device of claim 39 wherein the balloon member is in fluid communication with a separate lumen within the catheter and wherein a small quantity of air or another fluid is injected into the separate lumen to cause the balloon member to expand.

41. The device of claim 39 or claim 40 wherein the expansion of the balloon member occludes the bodily orifice about the catheter thereby preventing relative movement of the catheter to the bodily orifice.

42. The device of claim 37 wherein the orifice engaging member comprises a frusto-conical member that increases in diameter away from the free end of the catheter such that it seals the orifice about the catheter when it is inserted into the orifice.

43. The device of claim 26 wherein the catheter further includes a spacing member adapted to at least abut the body about and immediately adjacent the bodily orifice when the catheter is in the second position.

44. The device of claim 43 wherein the spacing member comprises a cup that is mounted to the catheter and spaced from its free end and wherein the distance between the free end of the catheter and the spacing member sets the maximum depth of insertion of the free end into the bodily orifice.

5 45. The device of claim 44 wherein the cup has a frusto-conical or cylindrical wall extending to a free end that is adapted to abut the body and wherein the cup is formed from a resiliently flexible polymeric or elastomeric material.

10 46. The device of claim 45 wherein the free end of the cup is spaced from the free end of the catheter by a distance of between about 1 and 5 cm.

47. The device of claim 2 wherein the orifice engaging means is expandable from a collapsed condition to an expanded condition.

15 48. The device of claim 47 wherein the orifice engaging means is insertable within the bodily orifice when in the collapsed condition.

16 49. The device of claim 47 or claim 48 wherein the orifice engaging means further includes a means to introduce an irrigating fluid into the orifice of a patient.

20 50. The device of any one of claims 47 to 49 wherein the orifice engaging means comprises an articulated jaw member.

51. The device of claim 50 wherein the jaw member is encased within a non-rigid and substantially cylindrical sleeve that is movable into abutment with the wall of the bodily orifice on articulation of the jaw into its expanded condition.

25 52. The device of claim 51 wherein the sleeve is formed from a silicone material.

53. The device of claim 51 or claim 52 wherein the combination of the jaw member and the sleeve acts as both the means of delivering an irrigating fluid to within the bodily orifice and an outlet for waste exiting the orifice.

30 54. The device of claim 53 wherein the irrigating fluid enters the chamber through a fluid inlet in the chamber.

55. The device of claim 54 wherein the fluid inlet is disposed in a wall of the chamber.

56. The device of claim 55 wherein the fluid inlet is in fluid communication with a pipe or tube connected to a fluid source.

57. The device of claim 1 further including a pumping means wherein the pumping means forces the irrigating fluid through the catheter lumen and wherein further, the pumping means regulates the rate of flow of water through the catheter lumen.

5 58. The device of claim 2 further including a pumping means to pump an irrigating fluid into the chamber and wherein the pumping means regulates the flow of irrigating fluid into the chamber.

59. The device of claim 57 or claim 58 wherein the pumping means is manually or mechanically operated.

10 60. The device of claim 57 or claim 58 wherein the pumping means provides fluid at a pressure between about 1 and 5psi.

61. The device of claim 57 or claim 58 wherein the pumping means includes a pressure release valve.

15 62. The device of claim 57 wherein the pumping means includes a fluid meter that measures the quantity of fluid that has passed through the catheter lumen and allows this measurement to be read by the user.

63. The device of claim 62 wherein the fluid meter further includes a means to shutdown or otherwise regulate operation of the pumping means once a predetermined quantity of fluid has passed through the catheter lumen.

20 64. The device of claim 49 wherein the pumping means includes a fluid meter that measures the quantity of fluid that has passed into the chamber and allows this measurement to be read by the user.

65. The device of claim 64 wherein the fluid meter further includes a means to shutdown or otherwise regulate operation of the pumping means once a predetermined quantity of fluid has passed into the chamber.

25 66. The device of claim 57 or claim 58 wherein the pumping means pumps between about 1 and 1.5 litres of irrigating fluid into the intestine of a patient.

30 67. The device of claim 1 wherein the irrigating fluid utilised in conjunction with the device includes water.

68. The device of claim 49 wherein the irrigating fluid utilised in conjunction with the device includes water.

91

5 69. The device of claim 67 or claim 68 wherein the irrigating fluid further includes stool softening agents such as liquid paraffin.

70. The device of any one of the preceding claims when used in the evacuation of waste product from artificial stomas including colostomies.

10 71. The device of any one of the preceding claims wherein the device is a portable device.

72. The device of claim 1 when used together with a pumping unit, the pumping unit including a suction means and a pumping means.

15 73. The device of claim 2 wherein the suction means is included in a pumping unit, the pumping unit further including a pumping means.

74. The device of claim 72 or claim 73 wherein the pumping unit is located within an outer housing.

75. The device of claim 72 or claim 73 wherein the pumping unit comprises a dual-action peristaltic type pump.

15 76. A method of evacuating waste from an orifice in a mammalian body using the device of claim 1, the method including the steps of:

- (i) abutting the inlet of the chamber to the body about the orifice;
- (ii) moving the irrigating means to the second position where its free end is at least partially within the orifice;
- 20 (iii) irrigating the bodily orifice with an irrigating fluid transported through the irrigating means; and
- (iv) applying suction to the outlet of the chamber to withdraw waste from the orifice into the chamber and through the outlet.

77. The method of claim 76 including the further step of sealingly engaging the free end of the irrigating means with the bodily orifice prior to, and at all times while, the bodily orifice is irrigated with the irrigating fluid.

25 78. The method of claim 77 wherein the sealing engagement of the free end is provided by an inflatable balloon that occludes the orifice around the irrigating means.

30 79. The method of claim 77 or claim 78 wherein the irrigating means is sealingly engaged with the wall of the bodily orifice for a period of time of between about 5 minutes and about 2 hours.

80. The method of claim 76 for the evacuation of waste product from artificial stomas, such as colostomies.

91

81. The method of claim 76 for evacuation of waste product from natural stomas, such as the anus.

82. A method of evacuating waste product from an orifice in a mammalian body using the device according to claim 2, the method including the steps
5 of:

- (i) abutting the inlet of the chamber to the body about the orifice;
- (ii) engaging the orifice engaging means within the orifice;
- (iii) irrigating the bodily orifice with an irrigating fluid; and
- (iv) applying suction to the outlet of the chamber to withdraw waste
10 from the bodily orifice into the chamber and through the outlet.

83. The method of claim 82 wherein the orifice engaging means is moved from a collapsed condition to an expanded condition to engage the bodily orifice.

84. The method of claim 82 for the evacuation of waste product from
15 artificial stomas, such as colostomies.

85. The method of claim 82 for the evacuation of waste product from natural stomas, such as the anus.